UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,777	09/17/2001	Mark Greenberg	04259P034	7792

7590	02/08/2005

Thomas C. Webster
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER
MEEK, JACOB M

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.   UK</td><td>Applicant(s)</td><td></td></tr>
<tr><td>09/954,777</td><td>GREENBERG ET AL.</td><td></td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Jacob Meek</td><td>2637</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>17 September 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1 - 34</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1 - 34</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>17 September 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/02, 4/03, 8/04</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   The drawings are objected to because of shading used in Figures 8, 12, 15, 16, 18, 20,

and 21 which obscures text and lines in shaded areas. Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should include all

of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed

from the replacement sheet, and where necessary, the remaining figures must be

renumbered and appropriate changes made to the brief description of the several views of

the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any

portion of the drawing figures. If the changes are not accepted by the examiner, the applicant

will be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.   Claims 1 – 3, 11 – 13, 17 – 19, and 25 -27 are rejected under 35 U.S.C. 102(e) as being anticipated by Nooralahiyan et al (US Patent 6,775,463).

With regard to claim 1, Nooralahiyan teaches a method of decoding data samples from a data stream (see column 2, lines 47 – 49), storing data samples processed from data stream (see column 3, lines 8 – 20 where this is interpreted as equivalent functionality), and replaying data samples stored in said replay buffer to restore decoder to state it was in when it last decoded samples from data stream prior to processing new data samples (see column 3, lines 21 – 27 where this replay functionality is interpreted as equivalent). Nooralahiyan further teaches that his device monitors to determine selected data stream (see column 3, lines 47 – 51 which is interpreted as equivalent functionality).

With regard to claim 2, Nooralahiyan teaches a method of temporarily storing values in associated with 1st data stream in a buffer (see column 4, lines 1 - 9 where circular buffer is interpreted as equivalent), and restoring values prior to replaying data samples stored in replay buffer (see column 4, lines 13 – 21 where this is interpreted as equivalent functionality).

With regard to claim 3, Nooralahiyan teaches a method of storing a number of values associated with a data stream (see column 4. lines 22 – 27 where this history loop is interpreted as containing N accumulator values).

With regard to claim 11, Nooralahiyan teaches a method of for decoder replay compromising decoding data samples from a data stream (see column 2, lines 47 – 49) decoder being in a 1st state after decoding 1st set of data (see column 3, lines 53 –56 where this is interpreted as equivalent functionality), temporarily storing 1st set of data in a buffer (see column 4, lines 1 – 5 where this is interpreted as equivalent), decoding other sets of data from one or more streams (see column 3, lines 47 – 51), restoring decoder to 1st state by re-decoding 1st set of data from buffer (see column 4, lines 13 – 21), decoding a second set of data from 1st data stream once decoder is restored to 1st state, decoder being in a 2nd state after decoding 2nd set of data (see column 5, lines 15 – 25, where this is interpreted as providing equivalent functionality).

With regard to claim 12, Nooralahiyan teaches a method of temporarily storing 2nd set of data in a buffer (see column 4, lines 1 - 9 where video packets are interpreted as equivalent), being usable to restore decoder to 2nd state after decoder has decoded additional data from data streams (see column 4, lines 13 – 21 where this is interpreted as equivalent functionality).

With regard to claim 13, Nooralahiyan teaches a method of storing a number of values associated with a data stream (see column 4. lines 22 – 27 where this history loop is interpreted as containing N accumulator values).

With regard to clams 17 – 19, the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious, considering the aforementioned rejection for the method claims of 1 – 3.

With regard to clams 25 – 27, the machine readable medium for code storage to implement the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious,

considering the aforementioned rejection for the method claims of 1 – 3 and in view of the
description of initialization process (see column 3, lines 44 – 67 and is interpreted as a
description of machine readable code).

Claim Rejections - 35 USC § 103

3.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over
Nooralahiyan ('463).

With regard to claim 20, Nooralahiyan teaches the number of accumulator values
associated with a data stream are equal to the number of data samples (see column 4, lines
1 –21 where circular buffer is interpreted as equivalent functionality). It would have been
obvious to one of ordinary skill in the art at the time of invention to utilize Nooralahiyan's
circular buffer to accumulate data samples in order to provide replay functionality.

4.   Claims 4 – 8, 14, 15, 21, 22, 28 – 32 are rejected under 35 U.S.C. 103(a) as
being unpatentable over Nooralahiyan ('463) in view of Haas et al (Advanced two IC chipset
for DVB on satellite reception; Haas, M.; et al.; Consumer Electronics, IEEE Transactions on , Volume: 42 , Issue:
3 , Aug. 1996; Pages:341 – 345).

With regard to claim 4, Nooralahiyan teaches a method of decoding a digital data stream
(see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his DVBC
block. Haas teaches a DVB (Digital Video Broadcast) receiver incorporating an FEC decoder
(see Figure 3, page 342). It would have been obvious to one of ordinary skill in the art at the
time of invention to incorporate a FEC decoder to decode the incoming data stream in order
to produce a recovered signal, as this is an inherent feature of DVB systems.

With regard to claim 5, Nooralahiyan teaches a method of decoding a digital data stream
(see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his DVBC
block. Haas teaches a DVB (Digital Video Broadcast) receiver incorporating a Viterbi

decoder (see Figure 3, page 342 which is interpreted as a form of maximum likelihood

decoding). It would have been obvious to one of ordinary skill in the art at the time of

invention to incorporate a maximum likelihood decoder to decode the incoming data stream in

order to produce a recovered signal, as this is an inherent feature of DVB systems.

With regard to claim 6, Nooralahiyan teaches a method of decoding a digital data stream

(see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his DVBC

block. Haas teaches a DVB (Digital Video Broadcast) receiver incorporating a convolutional

decoder (see section 2.8, page 344, second paragraph where convolutional deinterleaving

described is interpreted as equivalent). It would have been obvious to one of ordinary skill in

the art at the time of invention to incorporate a convolutional decoder to decode the incoming

data stream in order to produce a recovered signal, as this is an inherent feature of DVB

systems.

With regard to claim 7, Nooralahiyan teaches a method of decoding a digital data stream

(see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his DVBC

block. Haas teaches a DVB (Digital Video Broadcast) receiver incorporating a Viterbi

decoder (see section 2.5, page 344,). It would have been obvious to one of ordinary skill in

the art at the time of invention to incorporate a Viterbi decoder to decode the incoming data

stream in order to produce a recovered signal, as this is an inherent feature of DVB systems.

With regard to claim 8, Nooralahiyan teaches a method of decoding a digital data stream

(see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his DVBC

block. Haas teaches a DVB (Digital Video Broadcast) receiver incorporating a Viterbi

decoder (see section 2.5, page 344) of various depths (see page 344, 1st paragraphs where

rates are interpreted as various encoding depths). It would have been obvious to one of

ordinary skill in the art at the time of invention to incorporate a Viterbi decoder of depth N to

decode the incoming data stream in order to produce a recovered signal, as this is an inherent feature of DVB systems.

With regard to claim 14 and 15, these methods are identical to those of claim 4 and 5 and therefore, it would have been obvious, considering the aforementioned rejection for the method claims of 4 and 5.

With regard to clams 21 and 22, the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious, considering the aforementioned rejection for the method claims of 7 and 6 (where convolutional decoder is interpreted as equivalent to Turbo code decoder).

With regard to clams 28 – 32, the machine readable medium for code storage to implement the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious, considering the aforementioned rejection for the method claims of 4 – 8, and in view of the description of initialization process ('463, column 3, lines 44 – 67 and is interpreted as a description of machine readable code).

5.   Claims 9. 10, 16, 23, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nooralahiyan ('463) in view of Tawil et al (US Patent 6,690,926).

With regard to claim 9, Nooralahiyan teaches a method of decoding a digital data stream (see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his TS-IN block. Tawil teaches a method for receiving multiple digital data streams from different satellites (see column 1, lines 51 – 56 and Figure 1, 21, 22). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Tawil's invention in conjunction with Nooralahiyan's system to provide the enhanced feature of replay in a DVB system.

With regard to claim 10, Nooralahiyan teaches a method of decoding a digital data stream (see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the details of his TS-IN block. Tawil teaches a method for receiving multiple digital data streams from different satellites (see column 1, lines 51 – 56 and Figure 1, 21, 22). Tawil also teaches his system would be operable with other types of carriers (see column 2, lines 1- 13 where this is interpreted as being inclusive of cable carriers). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Tawil's invention in conjunction with Nooralahiyan's system to provide the enhanced feature of replay in a DVB system.

With regard to claim 16, this method is identical to those of claim 10 and therefore, it would have been obvious, considering the aforementioned rejection for the method claims of 10.

With regard to clam 23, the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious, considering the aforementioned rejection for the method claim of 9.

With regard to claim 24, Nooralahiyan teaches a system for decoding a digital data stream (see column 2, lines 47 – 49). Nooralahiyan is silent with respect to the use of additional decoders. Tawil teaches a system for decoding digital data streams with multiple decoders (see column 4, lines 50– 57 and Figure 1, 42, 45). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Tawil's invention in conjunction with Nooralahiyan's system to provide a system usable for DVB applications, as multiple decoders are required for operation.

With regard to clams 33 and 34, the machine readable medium for code storage to implement the components claimed as apparatus is nothing more than a restatement of the embodiment of the steps claimed as method and therefore, it would have been obvious,

considering the aforementioned rejection for the method claims of 9 and 10, and in view of the description of initialization process ('463, see column 3, lines 44 – 67 and is interpreted as a description of machine readable code).

Other Cited Prior Art

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. NPL references cited (Kwentus, A. et al; Mueller, K. et al) teach IC's that contain many of the aspects of applicant's invention, and provide an overview of the required elements for the creation of such a device (Sohi, N et al). Hemmati (US Patent 6,680,986) and Carson et al (US Patent 6,061,406) teach techniques for the sharing of decoder / demodulators. Birch (US Patent 5,923,755) and Rakib (US2002/0031120A1) teach multi-service devices, with Rakib also teaching recording / replay functionality. Carlsgaard et al (US2003/0223731A1) teaches a multi stream decoder.
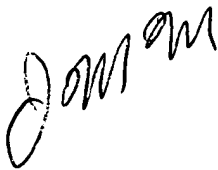
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JMM

JAY K. PATEL
SUPERVISORY PATENT EXAMINER